

Psychosocial Burden across Rheumatoid Arthritis, Osteoarthritis, and Psoriatic Arthritis: A Comparative Study

Muhammad Ammar Khan¹, Mahpara Munir², Syed Kamal Husnain Shah³, Muhammad Maroof³, Salman Azhar⁴ and Ayesha Shahab⁵

Burden across Rheumatoid Arthritis, Osteoarthritis, and Psoriatic Arthritis

ABSTRACT

Objective: To compare the perceived social support and psychosocial burden of patients with psoriatic arthritis, osteoarthritis, and rheumatoid arthritis.

Study Design: Comparative Cross-Sectional Study

Place and Duration of Study: This study was conducted at the Department of Medicine, Madinah Teaching Hospital / University Medical and Dental College, Faisalabad from January to June 2025.

Methods: Based on estimations from the World Health Organization calculator and corrected for non-response, 500 persons with psoriatic arthritis, osteoarthritis, or rheumatoid arthritis were included in the sample. Stratified random sampling was used to choose the eligible participants. A standardized questionnaire that included sociodemographic information, the Multidimensional Scale of Perceived Social Support, and the Depression Anxiety Stress Scale-21 was used to gather data in person. Tukey post-hoc tests, one-way analysis of variance, and descriptive statistics were used in the Statistical Package for the Social Sciences version 26 analysis; $p < 0.05$ was deemed significant.

Results: PsA patients showed significantly higher levels of depression, anxiety, and stress ($p < 0.05$) than RA and OA patients, as well as the lowest scores of MSPSS.

Conclusion: The findings highlight the significant psychological burden experienced by PsA patients as well as the significance of patient education, mental health screening, and a multidisciplinary approach in rheumatology therapy.

Key Words: Rheumatoid-Arthritis, Osteo-arthritis, Psoriatic-Arthritis, Psycho-social Burden

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INTRODUCTION

Chronic rheumatic disorders can affect every part of the body and have a major financial and emotional impact on patients as well as healthcare systems worldwide. Rheumatoid arthritis, osteoarthritis, and psoriatic arthritis are among the most prevalent of them, affecting a significant portion of the world's population. The Global Burden of Disease 2021 report states that rheumatoid arthritis alone accounts for 18.1 million disability-adjusted life years, making bone and joint illnesses one of the main causes of disability. Over 528

million people worldwide suffer with osteoarthritis, which is a major cause of pain, limited mobility, and a lower quality of life, especially for older persons¹⁻⁴.

Although psoriatic arthritis affects only 0.1% to 1% of the world's population, its burden is increased by the fact that it is often ignored or detected too late⁵⁻⁶.

Due to population growth, longer life expectancies, and changes in lifestyle brought on by urbanization, arthritis-related illnesses are becoming increasingly prevalent in nations like Pakistan. As per local estimates, 0.5% to 1% of people have rheumatoid-arthritis, 12% to 20% of people more than 40 years of age have osteoarthritis, and 20- 30% of persons with psoriasis may develop psoriatic-arthritis⁷⁻⁸. Although these diseases cause stiffness, pain and incapacity, they have far-reaching outcomes. In addition to, having difficulty with social interactions and reducing independence in daily activities, arthritis can cause chronic stress in many patients. Anxiety and depression are more common in people with arthritis than in the general population, according to research, and up to 40% of rheumatoid arthritis patients may have clinically severe depressive symptoms⁹. While psoriatic arthritis can be particularly challenging as it affects the joints as well as skin, commonly resulting in stigma,

¹. Registrar / Assistant Professor² / Fellow³, Department of Rheumatology, University Medical and Dental College Faisalabad.

⁴. Associate Professor of Medicine / Senior Registrar⁵, University Medical and Dental College Faisalabad.

Correspondence: Muhammad Ammar Khan, Registrar Rheumatology, University Medical and Dental College Faisalabad.

Contact No: 03453204431

Email: dowite2015@yahoo.com

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and emotional disturbances, osteo-arthritis may contribute to social separation as pain limits daily life activities.

Support from friends, family, and the larger community can be crucial in helping people manage the emotional challenges that frequently accompany chronic disease, adhere to treatment, and deal more successfully. It is challenging to comprehend the similarities and differences between rheumatoid arthritis, osteoarthritis, and psoriatic arthritis because many prior research have only looked at mental health in one type of arthritis at a time. This emphasises the necessity of directly comparing these illnesses in order to have a better understanding of their emotional impact and the patients' demands for social assistance¹⁰⁻¹¹.

The study evaluated patients with psoriatic arthritis, osteoarthritis, and rheumatoid arthritis in terms of social support, depression, anxiety, and stress.

METHODS

After being approved by the Institutional Review Board of University Medical and Dental College, Faisalabad (Approval No. TUF/UMDC/DME/37/25), this study was carried out at the rheumatology clinic of a tertiary care hospital from January to June 2025. Using a 95% confidence level, 80% power, and a medium effect size (Cohen's f = 0.25), the sample size was calculated using the World Health Organization sample size calculator to compare mean scores among three groups. In order to consider for probable non-response, the estimated sample size of 450 patients was increased to 500.

Following informed consent, adults more than 18 years of age who met the American College of Rheumatology/EULAR criteria for rheumatoid arthritis, osteo-arthritis, or psoriatic-arthritis were added. Patients with severe mental illness, other serious autoimmune or systemic diseases, or factors that could make it difficult for them to comprehend or respond to the questionnaire were not included. A sampling technique that guaranteed appropriate representation of each disease group was used to choose the participants. A standardised questionnaire comprising sociodemographic data, the Depression Anxiety Stress Scale-21, and the Multidimensional Scale of Perceived Social Support was used to gather the data.

Face-to-face interviews were done by qualified research personnel in the participant's preferred language. 62.2% participants were women, with mean age of 57.5 ± 15.1 years. Using descriptive statistics, comparisons among groups, and post-hoc testing, the SPSS version 26 was used for data analysis. A p-value of < 0.05 was deemed statistically significant.

RESULTS

The final results had 500 persons in total. Most of the patients were between 45 & 65 years old, having mean age of 57.5 ± 15.1 years, and the majority of them were women (62.2%). RA was the most common condition identified, followed by osteo and psoriatic-arthritis, which demonstrates what is commonly seen in routine clinical settings (see Table I).

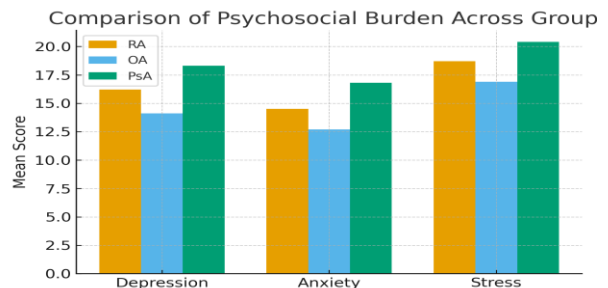
When the 3 groups were evaluated, marked differences were observed in emotional burden. Persons with rheumatoid-arthritis and psoriatic-arthritis had the highest mean ratings for stress and depression, whereas those patients with osteo-arthritis had generally lower values.

The differences among the 3 groups were statistically significant, and further testing revealed PsA had significantly higher emotional burden than both RA and OA patients (p < 0.05 for all comparisons). This indicates that patients with psoriatic-arthritis may face more mental distress, perhaps as a result of the condition's combination of both joint and skin involvement.

Table No.1: Participant's Demographic features

Variable/Group	N (%)
<35	91(18.2%)
<45	112 (22.4%)
<55	123(24.6%)
<65	117 (23.4%)
>=75	57 (11.4%)
Female	311 (62.2%)
Male	189 (37.8%)
RA	189 (37.8%)
OA	172 (34.4%)
PsA	87 (17.4%)

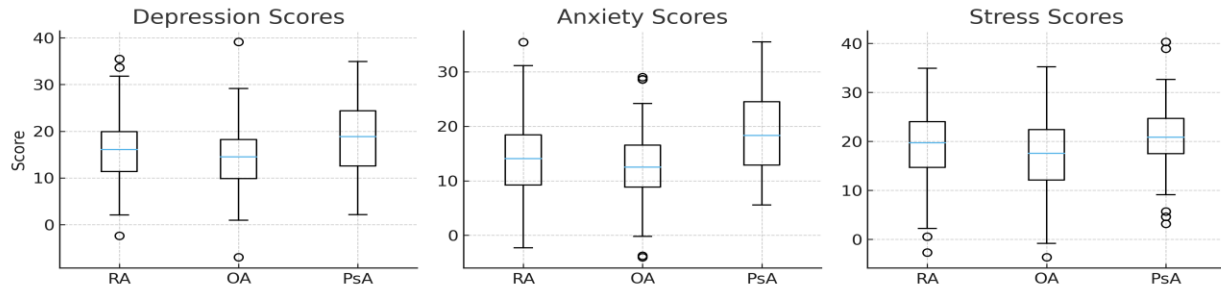
Majority of the patients were between the ages of 45 & 65, and 62.2% of them were women. The most common condition identified was RA, followed by PsA and OA.



Stress, anxiety & depression levels varied significantly among groups, with patients of PsA showing the highest psycho-social burden

Figure No.1: Psychosocial Burden Comparison by Group

Distribution of Psychosocial Burden Across Groups



Boxplots indicate that PsA patients have higher median ratings for stress, anxiety, & depression than the RA and OA patients.

Figure No.2: Boxplots of the DASS-21 Distribution

DISCUSSION

These results demonstrate that rheumatoid-arthritis, osteo-arthritis, and psoriatic-arthritis all have variable emotional burdens; patients with psoriatic-arthritis seem to be most affected. This is in line with previous research showing that people with psoriatic-arthritis commonly experience more emotional difficulties, maybe as a result of pain, and obvious skin involvement that could lead to embarrassment and reduced social confidence¹²⁻¹⁴.

The depression levels seen in rheumatoid-arthritis patients are also consistent with previous studies that reveal a greater prevalence of depressive features in this population. The moderate emotional disturbance among osteo-arthritis patients is consistent with earlier studies demonstrating that persistent pain can significantly affect mood and daily life functioning¹⁵. The greater stress ratings associated with psoriatic-arthritis are particularly significant because they emphasise how important it is to include mental health in normal care for these individuals.

Higher levels of social support were linked to decreased anxiety & depression ratings, which is another important finding. This lends credence to the idea that those who have support from friends & family members may be better equipped to face emotional difficulties¹⁶⁻¹⁸. This study's comparison of rheumatoid-arthritis, osteo-arthritis, and psoriatic-arthritis in the same environment and with the same evaluation protocols is one of its key strengths. This made it easier to find similarities and differences between these illnesses.

Overall, this study lends credence to the idea that patients with these three types of arthritis have different emotional challenges. Given the greater level of discomfort shown in psoriatic-arthritis patients, mental health screening ought to be a important component of rheumatology therapy rather as an optional extras. Care plans that combine medical care & emotional support may be beneficial for patients, especially those who have both visible skin disease & joint involvement.

This study offers many advantages as well as few drawbacks. The high sample size, which enhances the validity of the results within the study context, is one of its primary benefits. The use of reputable tools to calculate social support, anxiety & depression is another advantage. However, because the research relied on self-reported questionnaire responses, some people might have given socially acceptable answers or underreported their emotions. Furthermore, because the study was limited to a single centre, the results might not be entirely applicable to other areas. In order to ascertain whether emotional support interventions can enhance long-term outcomes, future research should follow patients over time and incorporate several locations.

CONCLUSION

The emotional burden of different forms of arthritis varied significantly, according to this study. PsA patients had the higher depression, anxiety & stress levels and the lowest documented social support. RA patients showed a moderate emotional challenges, while OA patients generally reported lower levels.

Author's Contribution:

Concept & Design or acquisition of analysis or interpretation of data:	Muhammad Ammar Khan, Mahpara Munir, Syed Kamal Husnain Shah
Drafting or Revising Critically:	Muhammad Maroof, Salman Azhar, Ayesha Shahab
Final Approval of version:	All the above authors
Agreement to accountable for all aspects of work:	All the above authors

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